



SEQUENCE LISTING

<110> AGRAWAL, SUDHIR
BHAGAT, LAKSHMI
WESTBORO, DONG YU
KANDIMALLA, EKAMBAR R.

<120> MODULATION OF IMMUNOSTIMULATORY PROPERTIES OF
OLIGONUCLEOTIDE-BASED COMPOUNDS BY UTILIZING MODIFIED
IMMUNOSTIMULATORY DINUCLEOTIDES

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<140> 10/757,345

<141> 2004-01-05

<150> 60/440,587

<151> 2003-01-16

<160> 192

<170> PatentIn Ver. 3.2

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<220>
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oligonucleotide

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<210> 96
<211> 19
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<220>
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oligonucleotide

<400> 96
tccatgacgt tcctgatgc 19

<210> 97
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<220>
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oligonucleotide

<400> 97
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<210> 98
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<220>
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oligonucleotide

<400> 98
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<210> 99
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oligonucleotide

<400> 99
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<210> 100
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oligonucleotide

<400> 100
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<210> 101
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<220>
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<210> 102
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<400> 102
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<400> 104
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<210> 105
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<220>
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<400> 105
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<210> 106
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<220>
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 oligonucleotide

<400> 106
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<210> 107
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<220>
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 oligonucleotide

<400> 107
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<210> 108
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 oligonucleotide

<400> 108
 cctactagcg t 11

<210> 109
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<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 109
 cctactagcg ttc 13

<210> 110
<211> 13
<212> DNA
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oligonucleotide

<400> 110
cctactagcg ttc

13

<210> 111
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<220>
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oligonucleotide

<400> 111
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14

<210> 112
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<220>
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oligonucleotide

<400> 112
cctactagcg ttc

13

<210> 113
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oligonucleotide

<400> 113
ctagcgttct catc

14

<210> 114
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<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 114
 cctactagcg ttc 13

<210> 115
 <211> 13
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<220>
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<400> 115
 tgacgttctc tgt 13

<210> 116
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 116
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<210> 117
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<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 117
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<210> 118
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<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 118
gacgttctct gt

12

<210> 119
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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 119
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<210> 120
<211> 13
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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 120
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13

<210> 121
<211> 13
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<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 121
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13

<210> 122
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oligonucleotide

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<210> 123
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oligonucleotide

<400> 123
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<210> 124
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oligonucleotide

<400> 124
tgacgttctc tgt 13

<210> 125
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<220>
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oligonucleotide

<400> 125
tgacgttctc tgt 13

<210> 126
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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 126
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14

<210> 127
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<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 127
tgacgttctc tgt

13

<210> 128
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<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 128
tgacgttctc tgt

13

<210> 129
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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 129
tgacgttctc tgt

13

<210> 130
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<220>
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<400> 130
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<210> 131
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 <212> DNA
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<220>
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 oligonucleotide

<400> 131
 tgacgttctc tgt 13

<210> 132
 <211> 13
 <212> DNA
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<220>
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 oligonucleotide

<400> 132
 tgacgttctc tgt 13

<210> 133
 <211> 13
 <212> DNA
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<220>
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 oligonucleotide

<400> 133
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<210> 134
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<212> DNA
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<220>
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oligonucleotide

<400> 134
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<210> 135
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oligonucleotide

<400> 135
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<210> 136
<211> 13
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oligonucleotide

<400> 136
tgacgttctc tgt 13

<210> 137
<211> 14
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<220>
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oligonucleotide

<400> 137
ctgacgttct ctgt 14

<210> 138
<211> 13
<212> DNA
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<220>
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oligonucleotide

<400> 138
ctatctgacg ttc 13

<210> 139
<211> 14
<212> DNA
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<220>
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oligonucleotide

<400> 139
ctgacgttct ctgt 14

<210> 140
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<220>
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oligonucleotide

<400> 140
ctatctgacg ttc 13

<210> 141
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 141
cgttctctgt 10

<210> 142
<211> 11
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<220>
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oligonucleotide

<400> 142
acgttctctg t 11

<210> 143
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<212> DNA
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<220>
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oligonucleotide

<400> 143
gacgttctct gt 12

<210> 144
<211> 13
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<220>
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oligonucleotide

<400> 144
tgacgttctc tgt 13

<210> 145
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 145
ctgacgttct ctgt 14

<210> 146
 <211> 10
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 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 146
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10

<210> 147
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 147
 ctatctgacg t

11

<210> 148
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 148
 ctatctgacg tt

12

<210> 149
 <211> 13
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 149
 ctatctgacg ttc

13

<210> 150
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 150
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10

<210> 151
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 151
 acgttctctg t

11

<210> 152
 <211> 14
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 152
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14

<210> 153
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 153
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11

<210> 154
<211> 13
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 154
ctatctgacg ttc

13

<210> 155
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 155
ctatctgacg ttctctgt

18

<210> 156
<211> 14
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 156
ctgacgttct ctgt

14

<210> 157
<211> 14
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 157
ctgacgttct ctgt

14

<210> 158
<211> 11
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 158
tctgacgttc t

11

<210> 159
<211> 11
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 159
tctgtcgttc t

11

<210> 160
<211> 6
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 160
tcgttg

6

<210> 161
<211> 6
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 161
tcgttg

6

<210> 162
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 162
tcgttg

6

<210> 163
<211> 5
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 163
tcgtt

5

<210> 164
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 164
acgttg

6

<210> 165
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 165
gcgttg

6

<210> 166
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
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oligonucleotide

<400> 166
ccgttg

6

<210> 167
<211> 6
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 167
gtcgtt

6

<210> 168
<211> 6
<212> DNA
<213> Artificial Sequence

<220>
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oligonucleotide

<400> 168
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6

<210> 169
<211> 6
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<220>
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oligonucleotide

<400> 169
tcgttg

6

<210> 170
<211> 11
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
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<222> (6)
<223> 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-
methylpurine

<400> 170
tctgtngttc t

11

<210> 171
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (6)
<223> AraG

<400> 171
ctgtcnttct c

11

<210> 172
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (3)
<223> 7-deaza-dG

<220>
<221> modified_base
<222> (6)
<223> 7-deaza-dG

<400> 172
tcntcnttct g

11

<210> 173
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (7)
<223> AraG

<400> 173
tctgtcnttc t

11

<210> 174
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (6)
<223> AraC

<400> 174
tctgtngttc t

11

<210> 175
<211> 11
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
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<222> (6)
<223> 2'-deoxy-5-hydroxycytidine

<400> 175
tctgtngttc t

11

<210> 176
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (6)
<223> 7-deaza-dG

<400> 176
ctgtcnttct c

11

<210> 177
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (5)
<223> 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-methylpurine

<400> 177
ctgtngttct c

11

<210> 178
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (5)
<223> AraC

<400> 178
ctgtngttct c

11

<210> 179
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (5)
<223> 2'-deoxy-5-hydroxycytidine

<400> 179
ctgtngttct c

11

<210> 180
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (3)
<223> AraG

<220>
<221> modified_base
<222> (6)
<223> AraG

<400> 180
tcttctttct g

11

<210> 181
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<220>
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 <223> 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-
 methylpurine

<220>
 <221> modified_base
 <222> (5)
 <223> 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-
 methylpurine

<400> 181
 tngtngttct g

11

<210> 182
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<220>
 <221> modified_base
 <222> (2)
 <223> AraC

<220>
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 <222> (5)
 <223> AraC

<400> 182
 tngtngttct g

11

<210> 183
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<220>
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 <222> (2)
 <223> 2'-deoxy-5-hydroxycytidine

<220>
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 <222> (5)
 <223> 2'-deoxy-5-hydroxycytidine

<400> 183
 tngtngttct g

11

<210> 184
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<220>
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 <222> (2)
 <223> May be 2'-deoxycytidine,
 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-
 methylpurine, AraC, or 2'-deoxy-5-hydroxycytidine

<220>
 <221> modified_base
 <222> (3)
 <223> May be 2'-deoxyguanosine, 7-deaza-dG or AraG

<220>
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 <222> (5)
 <223> May be 2'-deoxycytidine,
 1-(2'-deoxy-beta-D-ribofuranosyl)-2-oxo-7-deaza-8-
 methylpurine, AraC, or 2'-deoxy-5-hydroxycytidine

<220>
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 <222> (6)
 <223> May be 2'-deoxyguanosine, 7-deaza-dG or AraG

<400> 184
 tnntnnttct g

11

<210> 185
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<220>
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 oligonucleotide

<220>
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 <222> (2)
 <223> 7-deaza-dG

<220>
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 <223> 7-deaza-dG

<400> 185
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9

<210> 186
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 186
 ccatgacgtt cctgatg

17

<210> 187
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 187
 tccatgacgt tcctgatg

18

<210> 188
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 188
 ccatgacgtt cctgatgc 18

<210> 189
 <211> 18
 <212> DNA
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<220>
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 oligonucleotide

<220>
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 <222> (9)
 <223> 7-deaza-dG

<400> 189
 ctatctgang ttctctgt 18

<210> 190
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 oligonucleotide

<220>
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 <222> (9)
 <223> 7-deaza-dG

<400> 190
 ctatctgtng ttctctgt 18

<210> 191
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<220>
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 oligonucleotide

<220>
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<223> 7-deaza-dG

<400> 191
tctgangttc t

11

<210> 192
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<220>
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oligonucleotide

<220>
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<222> (6)
<223> 7-deaza-dG

<400> 192
tctgtngttc t

11